

# Model F600i

---

**Stereo and Home Theatre Systems**

---

## User manual





### **WARNING:**

**Do not exposure to rain, moisture or high humidity.**

**Do not open - High voltage inside**

**Do not cover the speaker. (e.g. with curtains)**

**Use only a mains-adaptor approved for the country of use.**

**Refer servicing to a qualified Final Sound dealer.**

## **1. IMPORTANT SAFETY INSTRUCTIONS**

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilations openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet
10. Protect the 12V DC power adaptor cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
12. Unplug this apparatus during thunderstorms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, for instance when the power-supply cord or plug is damaged, liquid has been spilled or objects are fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Do not open the apparatus.
15. To reduce the risk of electric shock, do not remove the back panel of the subwoofer. There are no user-serviceable parts inside. Refer servicing to a qualified Final Sound dealer.

**Warning:** High Voltage Inside.  
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

**Warning:** The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

### **Explanation of used symbols:**



**This flash symbol** indicates that the outlet carrying this symbol is carrying a dangerous voltage.



The double insulation symbol indicates a double insulated product. In a double-insulated product, two systems of insulation are provided instead of grounding.



The exclamation mark indicates that special attention has to be given to the indicated remark.

## 2. CONGRATULATIONS!

We congratulate you on the purchase of a Final Sound flat-panel loudspeaker system.

You have invested in the finest instrument for audio reproduction available. The Final Sound product line consists of front- and rear flat-panel speakers, center speakers and subwoofers.

The product line is based on a unique modular system. Final Sound offers you the possibility to start buying a stereo system and easily extend this at any convenient time in to a complete Final Sound Home Theatre system. You can do this just by adding a center speaker and/or another set of Final Sound flat-panel speakers.

The Final product line is designed to surpass the performance of other existing speakers and contains some of the most elegant and sophisticated designs ever used for music reproduction.

The flat-panel speakers are capable of producing very pure and accurate sound due to their ultra low mass diaphragm. The Final Sound technology has evolved through many years of research and development.

The Final Sound subwoofers are designed to match perfectly with the characteristics of the Final Sound loudspeaker panels.

The Model F600i speakers are designed for the use in a stereo setting or a so-called 5.1 Home Theater configuration.

In the stereo setting there is a left and a right speaker channel. In a Home Theatre configuration however there are 2 front channels, 2 rear channels, 1 center channel and a subwoofer (low frequency) channel.

The Model F600i flat-panel speakers are floor-standing loudspeakers. However Final Sound provides specially designed brackets to mount the speaker-panels on the wall. The brackets can be obtained as an accessory.

The Final Sound Model F600i Stereo system consists of the following components:

- 2 F600i Final Sound flat-panel speakers (left and right channel).
- As the F600i start at 45Hz 1 Final Sound subwoofer (S200) is recommended as an optional choice (to be purchased separately)

The complete Final Sound Model F600i Home Theatre system consists of the following components:

- 2 F600i Final Sound flat-panel front speakers.
- 2 F600i Final Sound flat-panel rear speakers (Or another pair of Final Sound Speakers as surrounds e.g. the F600i).
- 1 F400i CP Final Sound flat-panel center speaker.
- Recommended 1 Final Sound subwoofer (S200 To be purchased separately).

This manual includes the instructions for all separate Final Sound components mentioned above.

On page 4 you can find where to read the specific instructions you need.

Please read and follow these instructions carefully before you connect your Final Sound system to your amplifier. These instructions are very important and will prevent you from experiencing any delay or system damage, which might occur in a trial and error situation.

Final Sound wishes you great listening enjoyment!

### 3. TABLE OF CONTENTS

<b>1. IMPORTANT SAFETY INSTRUCTIONS</b>	<b>2</b>
<b>2. CONGRATULATIONS</b>	<b>3</b>
<b>3. TABLE OF CONTENTS</b>	<b>4</b>
<b>4. WARRANTY CONDITIONS</b>	<b>5</b>
<b>5. HOW TO PERFORM A QUICK AND PROPER INSTALLATION</b>	<b>7</b>
<b>6. FINAL SOUND MODEL F400i CENTER SPEAKER</b>	<b>8</b>
6.1 What is the function of a Center Speaker?	
6.2 Where do I place the Final Sound Center Speaker?	
6.3 How do I start installing the Final Sound Center Speaker safely?	
6.4 How do I clean and maintain the Final Sound Center Speaker?	
<b>7. FINAL SOUND MODEL F600i FLAT-PANEL FRONT AND REAR SPEAKERS</b>	<b>10</b>
7.1 What is the function of the Final Sound front and rear speaker panels?	
7.2 Where do I place the Final Sound speaker panels?	
7.3 How do I install the Final Sound speaker panels safely?	
7.4 How to clean and maintain the Final Sound front and rear speaker panels?	
<b>8. FINAL SOUND SUBWOOFER (UNIT HAS ITS OWN USER MANUAL)</b>	<b>12</b>
8.1 What is the function of the Final Sound subwoofer?	
8.2 How do I unpack the Final Sound subwoofer safely?	
8.3 How do I perform a safe installation?	
8.4 Where do I place the Final Sound subwoofer?	
8.5 How do I connect the wires?	
8.6 How to clean and maintain the Final Sound subwoofer?	
<b>9. CONNECTING THE FINAL SOUND HOME THEATRE SYSTEM</b>	<b>14</b>
<b>10. GENERAL INFORMATION ABOUT FINAL TECHNOLOGY</b>	<b>18</b>
<b>11. FREQUENTLY ASKED QUESTIONS (FAQ)</b>	<b>19</b>
<b>12. WARRANTY CARD</b>	<b>22</b>

## 4. WARRANTY CONDITIONS

### **Automatic Coverage**

Thank you for purchasing this Final Sound product. We have made every effort to insure that it represents the highest level of performance, reliability and finish. A Limited Ninety Day Warranty covers your Final Sound product. This ninety-day coverage is automatic upon your acceptance of delivery and no registration is required.

### **Free Extended Warranty Coverage**

Additionally, you have the option, at no cost to you, to secure extended warranty coverage for a period of three years from the date of purchase by the original purchaser, simply by returning this completed Limited three Year Warranty Registration Card and a photocopy of your original purchase receipt in the enclosed postage paid envelope to Final Sound within thirty days of product delivery.

### **Limited Ninety Day Warranty**

Final Sound warrants the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions hereinafter set forth, for a period of ninety (90) days from the date of purchase by the original purchaser.

#### **Conditions**

This warranty is subject to the following conditions and limitations: the warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than Final Sound or an authorized Final Sound dealer. If returned, the product must be properly packaged and shipped to Final Sound or an authorized Final Sound dealer by the customer at his or her sole expense. A returned product must be accompanied by a written description of the defect and proof of the date of purchase. Final Sound reserves the right to modify the design of any product without obligation to purchaser of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.

#### **Exclusions**

Any implied warranties relating to the above product shall be limited to the duration of the above warranty. The warranty does not extend to any incidental or consequential costs or damages to the purchaser. Some countries/states do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from country/state to country/state. This warranty represents a limited warranty as defined above.

### **Optional Limited Three Year Warranty**

Upon receipt of the completed Limited Three Year Warranty Registration Card and copy of the original purchase receipt, the registered product will carry the following warranty coverage.

### **Limited Warranty**

Final Sound warrants the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions hereinafter set forth, for a period of three years from the date of purchase by the original purchaser.

#### **Conditions**

This warranty is subject to the following conditions and limitations. The warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than Final Sound or an authorized Final Sound dealer. If returned, the product must be properly packaged and shipped to Final Sound or an authorized Final Sound dealer by the customer at his or her sole expense. A written description of the defect and a photocopy of the validated warranty must accompany a returned product. Final Sound reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.

**Remedy**

In the event the product fails to meet the above Warranty and the above conditions have been met, the purchaser's sole remedy under this Limited Warranty shall be to return the product to Final Sound or an authorized Final Sound dealer where the defect will be rectified without charge for parts or labor.

**Restriction**

This Warranty is for the sole benefit of the original purchaser of the covered product, is restricted to the original purchaser, and shall not be transferred to a subsequent purchaser of the product.

**Duration**

This Warranty expires on the fifth anniversary of the date of purchase. During the first ninety (90) days following the date of purchase by the original purchaser, the Final Sound Limited Ninety Day Warranty supersedes this Warranty.

**Exclusions**

Any implied warranties relating to the above product shall be limited to the duration of the above warranty. The warranty does not extend to any incidental or consequential costs or damages to the purchaser. Some countries/states do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights that vary from country/state to country/state. This Warranty represents a limited warranty as defined above.

## 5. HOW TO PERFORM A QUICK AND PROPER INSTALLATION

The Final Sound loudspeaker system consists of separate products, which can function individually or perform as a complete system.

Every product has its own description. For your comfort we answer hereby the following questions for you:

- What is the function of the specific product?
- How do I start installing it safely?
- Where do I place this product?
- How to clean and maintain the product?

Thus, you only have to read page 4, 7 and the chapter corresponding with the product you have bought. Whenever necessary, we have provided diagrams to illustrate the answers to these questions. We wish you success with the installation procedures and great listening enjoyment afterwards!

### **How to unpack the Final Sound Model F600i Stereo/Home Theatre System**

The Final Sound Model F600i Stereo consists of two separate packaging units. The Model F600i flat-panel speakers and the Final Sound subwoofer are packed separately.

The Final Sound Model F600i Home Theatre System consists of four separate packaging units. Two times the Model F600i flat-panel speakers, the Model F400i CP center panel speaker and the Final Sound subwoofer are packed separately.

#### **The Model F600i Stereo flat-panel speaker packaging contains:**

- 2 Model F600i flat-panel speakers (left and right)
- 2 power supplies 12VDC
- 2 Footplate assemblies in a separate box
- Assembly materials including screws, plugs and a hex key.
- 1 Manual

Final Sound will also provide specially designed brackets to mount the speaker-panels on the wall. The brackets can be obtained as an accessory.

#### **The Model F600i Home Theatre flat-panel speaker packaging contains:**

- 1 Model F400i CP flat-panel center speaker
- 2 Model F600i front flat-panel speakers (left and right)
- 2 Model F600i rear flat-panel speakers (left and right)  
(or another pair of Final Sound speakers as Surround (e.g. the F400i))
- 5 power supplies 12VDC (packed with the various speakers)
- Footplates (packed with the various speakers)
- Assembly materials including screws to fix the flat-panels on the footplates.
- 1 Manual

Final Sound will also provide specially designed brackets to mount the speaker-panels on the wall. The brackets can be obtained as an accessory (except in case of the F400i CP where it is standard included in the product packaging).

*The flat-panel speakers of the Model F600i Stereo System are physically identical to the front and rear flat-panel speakers of the Model F600i Home Theatre System.*

#### **The Final Sound subwoofer packaging contains the following items:**

- 1 Final Sound subwoofer
- 1 AC power cord
- 1 Final Sound subwoofer manual

### **Unpacking procedure**

Each individual component is packed in its own carton. The easiest way to unpack is to open the upper side of the box (check the labels), take out the separate units and carefully remove the cartons and plastic bags.

*If your packaging is not complete, do not operate the system but contact your dealer.*

*We recommend you to save all packaging materials for possible later use.*

*If any unit appears to be damaged when unpacking, do not operate the damaged unit. Repack the unit in its original carton and notify your authorized Final Sound dealer immediately.*

## 6. FINAL SOUND MODEL F400i CENTER SPEAKER

### 6.1 What is the function of a Center Speaker?

The center channel is the most important channel in a Home Theatre system. Its audio signals deliver critical localization cues to our ears to keep the voices and special effects locked on-screen. The Final Sound flat-panel center speaker is a true line source, with a single speaker element to deliver precise localization. Today's electro-dynamic and hybrid center channel speakers are flawed using multiple drivers. By refusing to compromise on these important design criteria, Final Sound has created what many people will be calling the most accurate center channel system in the world.

The Final Sound flat-panel center speaker is designed to function in harmony with the Final Sound subwoofer. The subwoofer will add the low frequency information to the center channel.

### 6.2 Where do I place the Final Sound Center Speaker?

The Final Sound Model F400i center speaker should be placed directly under or above your TV or video screen in a horizontal mode. If you are not sure, contact your dealer for further details.

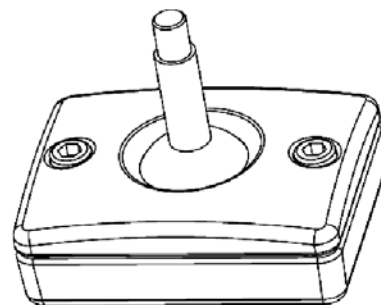
The center speaker panel is labeled with the F400i WMCP code. The flat-panel center speaker has to be mounted on the wall by means of the special mount (included in the package) or placed on an optional Final Sound stand.

The bracket consists of a wall plate, a ball-bar and a cover plate.

To install the bracket you first have to fix the wall plate of the mount to the wall by means of the 4 screws and if necessary the plugs.

You then insert the ball-bar into the cover plate and screw the cover plate onto the wall plate with the two hex screws. Do NOT tighten.

Lastly you take the speaker and screw the ball-bar into its bracket at the back. Tighten it by hand. Then tighten the two hex screws with the supplied Allen key. Do NOT over tighten.



You can now tighten the ball-bar into the speaker by slightly twisting the speaker in clockwise direction when standing in front of the speaker. Do NOT apply excessive force.

Finally, the speaker position can be adjusted by un-tightening the hex screws, bringing the speaker into the required position and re-tightening the hex screws.

**Final has also designed matching floor stands, these floor stands can be purchased separately by your dealer if you do not want to wall mount the speakers. In the case you want to purchase the Final Sound Floor stands, the wall mounts can be used to assemble the speakers on the floor stands, allowing you to direct the speakers to the listening area.**



### **6.3 How do I start installing the Final Sound Center Speaker safely?**

Before connecting the center speaker panel, your audio system should be disconnected from the main power supply until you have gone through all steps as explained in this manual. This will avoid the risk of damage to your system while connections are made or broken.

The center speaker panel comes with a 12VDC power supply, which has to be connected to the mains. It is necessary to connect the flat-panel speakers to the mains; otherwise it will not function. The flat-panel speakers are designed to stay on the mains permanently, however it is better to disconnect them during thunderstorms.

The center speaker is equipped with speaker terminals, which are suited for spades or common loudspeaker wires. The red speaker terminal has to be connected to the red terminal (+) on the Audio/Video receiver and the black terminal has to be connected to the black terminal (-) on the Audio/Video receiver.

For connecting the wires we refer to the chapter *"Connecting the Final Home Theatre System."*

### **6.4 How do I clean and maintain the Final Sound Center Speaker?**

Always unplug the Final Sound center speaker from the mains and shut off all sound equipment before start cleaning. To prevent fire or shock hazard, clean only with a DRY cloth and prevent pushing the black (sound producing) part of the speaker and also prevent dust and small particles to fall into the black panel with the diaphragm. Never use cleaners, chemicals or liquids, which might drip into the black sound-producing unit.

## 7. FINAL SOUND F600i FLAT-PANEL FRONT AND REAR SPEAKERS

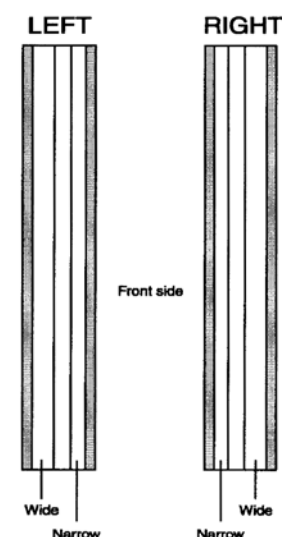
### 7.1 What is the function of the Final Sound front and rear speaker panels?

The Final Sound flat-panel front speakers are the main channels in a stereo setting and have a dual role in a Home Theater system. The front and rear speakers are used to create ambient effects. In a home cinema setting even actions occurring at the back of the listener will be reproduced. Both in a stereo configuration and a Home Theater configuration, the flat-panel speakers function in close harmony with the Final Sound subwoofer, which does not have to be placed near-by. This is due to the fact that the human ear cannot locate low frequencies as well as middle and high frequencies.

The Final Sound Model F600i flat-panel speakers are designed to be used as floor-standing loudspeakers. However Final Sound provides as an option specially designed brackets to mount the speaker-panels on the wall. The brackets can be obtained as an accessory. After having installed the floors-standing speaker-panels or after having mounted the speaker-panels on the wall by means of the brackets, the panels can be adjusted towards the listening position.

### 7.2 Where do I place the Final Sound speaker panels?

There is a difference between a left (front/rear) and a right (front/rear) Final Sound speaker panel. Spacers in four vertical segments divide each Final Sound loudspeaker panel. The narrow strips have to be oriented to the inside. The difference is shown in the figure beside. To illustrate the best position of the speaker panels we have to differentiate between Final Sound Stereo and Final Sound Home Theatre configurations.

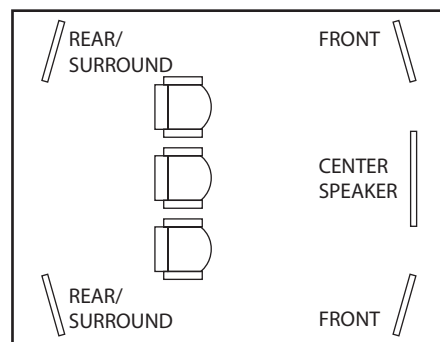


#### Application 1: The Final Sound Home Theatre configuration:

The Final Sound Home Theatre configuration consists of two front-speakers, two rear/surround speakers, a center speaker and a subwoofer. We recommend a symmetric positioning of the speakers with respect to the screen, as to enhance the "home cinema experience". The center speaker and front speaker panels should be located on the same horizontal axis. Sometimes it's even better to place the center speaker slightly further away than the front speakers. You want to create an "arc" that places the 3 speakers in the front at the same distance from the listener as shown in the illustration. Please note that electrostatics are dipoles, i.e. the speakers produce sound from both sides of the panels. This means an electrostatic speaker should always be placed away from the wall and turned under a slight angle with the wall (not parallel with the wall).

The surround or rear speakers should be positioned adjacent to and slightly behind the primary listening area, on the rear wall or floor to provide a sense of spaciousness and ambience for all Surround Sound formats.

The subwoofer is not shown in the figure above since its location has less influence in the overall sound performance than the position of the front, rear and center speakers. You can read more about the subwoofer location in chapter 'Final Sound subwoofer'.



#### Application 2: Final Sound Stereo configuration:

The panels in a stereo setting are preferably located in a symmetrical way and slightly away from the walls for optimum imaging. The panels need to point slightly towards the favorite listening position as you can see in the figure above looking at only the front speakers (the other speakers shown are not applicable in a stereo setting). The subwoofer is not shown in the figure since its location has less influence in the overall sound performance compared to the Final Sound panels. You can read more about the subwoofer in the chapter 'Final Sound subwoofer'.

## 7.3 How do I install the Final Sound speaker panels safely?

The speaker panels are labeled with an L: Left and R: Right code.

The Model F600i flat-panel speakers are designed to use as floor-standing loudspeakers. The egg-shaped footplates have to be fixed under the flat-panels by means of the screws (included in the packaging).

However Final Sound provides specially designed brackets to mount the speaker-panels on the wall. The brackets can be obtained as an accessory except for the F400i center panel, which comes with both a footplate and a bracket, offering a choice. The brackets consist of a wall plate and a bar. To install the brackets you first have to fix the wall plate to the wall by means of the 4 screws and if necessary the plugs, then you have to screw the bar into the wall plate. When you look at the backside of the speaker panels you notice the fitting hole for inserting the bar in to the speaker panel.

After having installed the brackets on the wall, you can mount the panel on the bracket and fix the panel by screwing in the hexagonal screw above the fitting hole. An appropriate Allen key is included in the package.

Each flat-panel speaker panel comes with a 12VDC power supply, which has to be connected to the mains. It is necessary to connect the flat-panel speakers to the mains; otherwise they won't function. The flat-panel speakers are designed to stay on the mains permanently; however it is better to disconnect them during thunderstorms.

The front and rear flat-panel speakers are equipped with speaker terminals, which are suited for spades or common loudspeaker wires. The red speaker terminal has to be connected to the red terminal (+) on the Audio/Video receiver and the black terminal has to be connected to the black terminal (-) on the Audio/Video receiver. For connecting the wires we refer to the chapter *"Connecting the Final Home Theatre System."*

Before connecting the front and rear speaker panels, all sound system equipment should be disconnected from the mains until you have gone through all steps below. This will avoid the risk of damage to your system while connections are made or broken. If you experience any problems installing the flat-panel speakers please contact your authorized Final Sound dealer.

## 7.4 How to clean and maintain the Final Sound front and rear speaker panels?

Always unplug the Final Sound flat-panel speakers from the mains and shut off all sound equipment before you start cleaning. To prevent fire or shock hazard, clean only with a DRY cloth and prevent pushing the black (sound producing) part of the speaker panels and also prevent dust and small particles to fall in the panel. Never use cleaners or chemicals or any liquids, which risk dripping into the speaker panels.

## 8. FINAL SOUND SUBWOOFER

### 8.1 What is the function of the Final Sound subwoofer?

The Final Sound subwoofer is capable to reproduce music signals up to 250 Hz, which is a unique feature and exclusive to the Final Sound concept. This Final Sound Subwoofer is designed to match perfectly with the characteristics of the Final Sound Model F600i flat-panel speakers and belongs with the electronics and its perfect driver to the upper end of the subwoofer range. The Final Sound Subwoofer cabinet is provided with a down-firing active subwoofer and a build-in amplifier.

### 8.2 How do I unpack the Final Sound subwoofer safely?

#### **This package includes**

- One AC-power cord
- One Final Sound subwoofer
- One user manual for the subwoofer

*If your package is not complete, do not operate the system but contact your Final Sound Dealer.*

*The easiest way to unpack is the following. Put the box on a flat surface on the ground. Open one side by cutting the tape carefully without damaging the contents of the box. You find the subwoofer in a plastic foil, with shock absorbing buffers positioned around the corners. Now carefully take out the subwoofer, please avoid touching the woofer unit positioned at the downside of the cabinet. We recommend saving all packaging materials for possible later use. Avoid touching the woofers.*

*If any unit appears to be damaged when unpacking, do not operate the damaged unit. Repack the unit in its original carton and notify your authorized Final Sound dealer immediately.*

*For further details please look at the manual supplied with the subwoofer.*

### 8.3 How do I perform a safe installation?

**IMPORTANT:** Before connecting the subwoofer, all sound system equipment should be disconnected from the mains until you have gone through all steps below. This will avoid the risk of damage to your system while connections are made or broken.



#### **Warning:**

High Voltage Inside. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

### 8.4 Where do I place the Final Sound subwoofer?

The Final Sound subwoofer is developed to reproduce music signals of the audio range below 250 Hz. Our human ears can locate the higher frequencies much better than the low frequencies that come out of the subwoofer. This makes the positioning of the subwoofer less critical than full range speakers. The definite location should be a compromise between sound and your domestic preferences.

For an easy start we recommend to place the unit between the left and right front speaker. Make sure that air can flow around the cabinet also on the back of the subwoofer for cooling reasons, especially when you are planning to place the subwoofer in some kind of furniture or on a small area.

The Final Sound Subwoofers covers the low frequency range (from 25Hz for the S200 and 35Hz for the S100 and 40Hz for the S90)) up to 250Hz. While the F600i covers the frequency range from 45Hz up to 20kHz, it is important to define carefully the crossover frequency between the subwoofer and the electrostatic panels, which is influenced by the acoustic properties of the room and the placement of the subwoofer.

## 8.5 How do I connect the wires?

There are various applications and systems where the subwoofer can be used for and therefore there are also various ways how the subwoofer can be connected. The different options are described below to make an easy shift to the applicable audio system possible.

Using an Audio/Video receiver or multi-channel amplifier, the connection of the Final Sound subwoofer in a Home theater system can be done in several ways, depending on the brand of the A/V receiver or amplifier you use. In the figure in the following chapter 'Connecting the Final Home Theatre System, the connections between the Audio/Video receiver multi-channel amplifier and the Final Sound subwoofer are represented by means of lines.

The exceptions are:

- the connection between pre-out front and line-input of the subwoofer. This connection will make sure you can use the crossover on the Final Sound subwoofer up to 250 Hz. Please read the amplifier's manual for further details or ask your Final Sound dealer.
- the connections between the loudspeakers output on your amplifier and the high-power inputs on your subwoofer. Some multi channel amplifiers need this connection to be able to play stereo (only left and right panel + subwoofer playing). Please check your amplifier's manual to check if this will work or ask your Final Sound dealer for further details.

## 8.6 How to clean and maintain the Final Sound subwoofer?

After switching the Final Sound subwoofer off, always unplug the subwoofer from the amplifier and disconnect the power cord before you start cleaning. To prevent fire or shock hazard, clean only with a damp cloth. Never use cleansers or chemicals. Never leave a wet cloth on the surface of the cabinet.

## 9. CONNECTING THE FINAL SOUND HOME THEATRE SYSTEM

For the wiring scheme of the complete Final Sound Model F600i Home Theatre System please have a look at figure 1 at page 16. The wiring scheme of the Final Sound Model F600i Stereo system is represented in figure 2 at page 17.

There are 4 different types of connections shown in this figure to get the best performance and functionality from your Home Theater System.

**Interlinks:** these audio signal cables have RCA-type pin leads on both sides, which fit on the pre-output plugs on your amplifier and the subwoofer line-input plugs. These cables are not included in the Final Sound Model F600i Home Theatre System package. These cables are commercially available at your dealer in variable lengths and qualities.

**Loudspeaker cable (marked B in figure 1):** these cables fit on the loudspeaker outputs of your amplifier. You can connect them with the high power-input on the Final Sound subwoofer. Normally these wires are equipped with so-called spades. These cables are commercially available at your dealer in variable lengths and qualities.

Please read your manual or contact your dealer if you are not sure to get the optimal sound from your system.

**Loudspeaker cable (marked C in figure 2):** these cables fit on the loudspeaker outputs of your Audio/Video receiver or amplifier. These cables, which can be equal to cable B (see above), are used to connect the Model F600i flat-panel speakers to the Audio/Video receiver or amplifier. Please be absolutely sure you connect the red (+) terminal of the flat-panel speaker to the corresponding red (+) terminal of the Audio/Video receiver and the black (-) terminal of the flat-panel speaker to the corresponding black (-) terminal of the Audio/Video receiver! These speaker cables are available at your dealer in variable lengths and quality.

**12 VDC power supply cords:** these are necessary to connect the Model F600i flat-panel speakers to the mains. All the flat-panel speakers can only function well if they are connected to the mains. The 12 VDC power supply cords are not shown in figure 1 and 2.

Before connecting the flat-panel speakers, all sound system equipment should be disconnected from the power supply until you have gone through all steps below. This will avoid the risk of damage to your system while connections are made or broken.

### Step 1

Make sure before starting that all sound equipment is disconnected from the mains. After doing so, please continue with the install procedure.

First make the connections from the center channel loudspeaker output of your Audio/Video receiver or multi channel amplifier to the Final Sound Model F600i flat-panel center speaker. Make sure that the red (+) terminal of the speaker is connected to the red terminal (+) of the Audio/Video receiver and the black (-) terminal of the speaker is connected to the black terminal (-) of the Audio/Video receiver (see figure 1).

Make the connection from the Front channel loudspeaker output of your Audio/Video receiver or multi channel amplifier to the Final Sound Model F600i flat-panel front speakers. Make sure that the + and - are properly connected (see figure 1).

Make the connection from the Rear channel loudspeaker output of your Audio/Video receiver or multi channel amplifier to the Final Sound Model F600i flat-panel rear speakers. Make sure that the + and - are properly connected (see figure 1).

### Step 2

Check all connections of the Final Sound loudspeakers properly before connecting the flat-panel speakers to the mains. Each flat-panel speaker (e.g. the center, front and rear speakers) has to be connected to the mains. The electronics in the flat-panel speakers are designed to stay powered permanently. Figure 1 on page 16 shows the connection scheme of a complete Final Sound Home Theatre configuration.

### Step 3

Make the necessary connections of the Audio/Video receiver to your Final Sound subwoofer.

The Final Sound subwoofer is designed with two uses in mind. It provides bass to the front channels and to the center channel. Therefore both the subwoofer pre-out and the center pre-out on your Audio/Video receiver or multi channel amplifier have to be connected to the (left and right) line-inputs on the Final Sound subwoofer (as shown in Figure 1).

We recommend connecting the left and right front loudspeaker outputs on your Audio/Video receiver or multi channel amplifier with the left and right high power inputs on the Final Sound subwoofer. Please be aware, that there are several ways to connect the subwoofer to your multi-channel amplifier, depending on the brand of multi-channel amplifier that you use. We therefore highly recommend reading your amplifier manual or if any questions are still unsolved, to ask your Final Sound dealer for further details. Wrong or improper connections may cause damage to your system!

#### **Audio/Video receiver settings**

The speakers in the Final Sound Home Theater System are designed to function in perfect harmony as a full range system. For an optimum performance your Audio/Video receiver settings are very important, since perfect sound starts with the right signal output.

In terms of your Audio/Video receiver settings, the front-, rear- and center speaker channels have to be set as MEDIUM satellites, when using the Model F600i flat-panel speakers. How to install the optimal channel settings differs with the brands of the Audio/Video receivers and therefore we recommend reading the Audio/Video receiver manual or contact your dealer how to get the best settings in order to get the Real Final Sound out of your system.

As explained before also the Final Sound Model F400i center speaker is designed to function in harmony with the Final Sound subwoofer.

#### **Connecting the Final sound model F600i Stereo System**

Figure 2 on page 17 represents the wiring scheme of the Stereo System.

Before connecting the flat-panel speakers, all sound equipment should be disconnected from the mains until you have gone through all steps below. This will avoid the risk of damage to your system while connections are made or broken.

First make the connection from the *left and right channel loudspeaker output* of your stereo amplifier to the Final Sound Model F600i flat-panel speakers. Make shure that the + and – are properly connected (see figure 2, cable C).

Then you have to connect the flat-panel speakers to the mains. The electronics in the flat-panel speakers are designed to stay powered permanently.

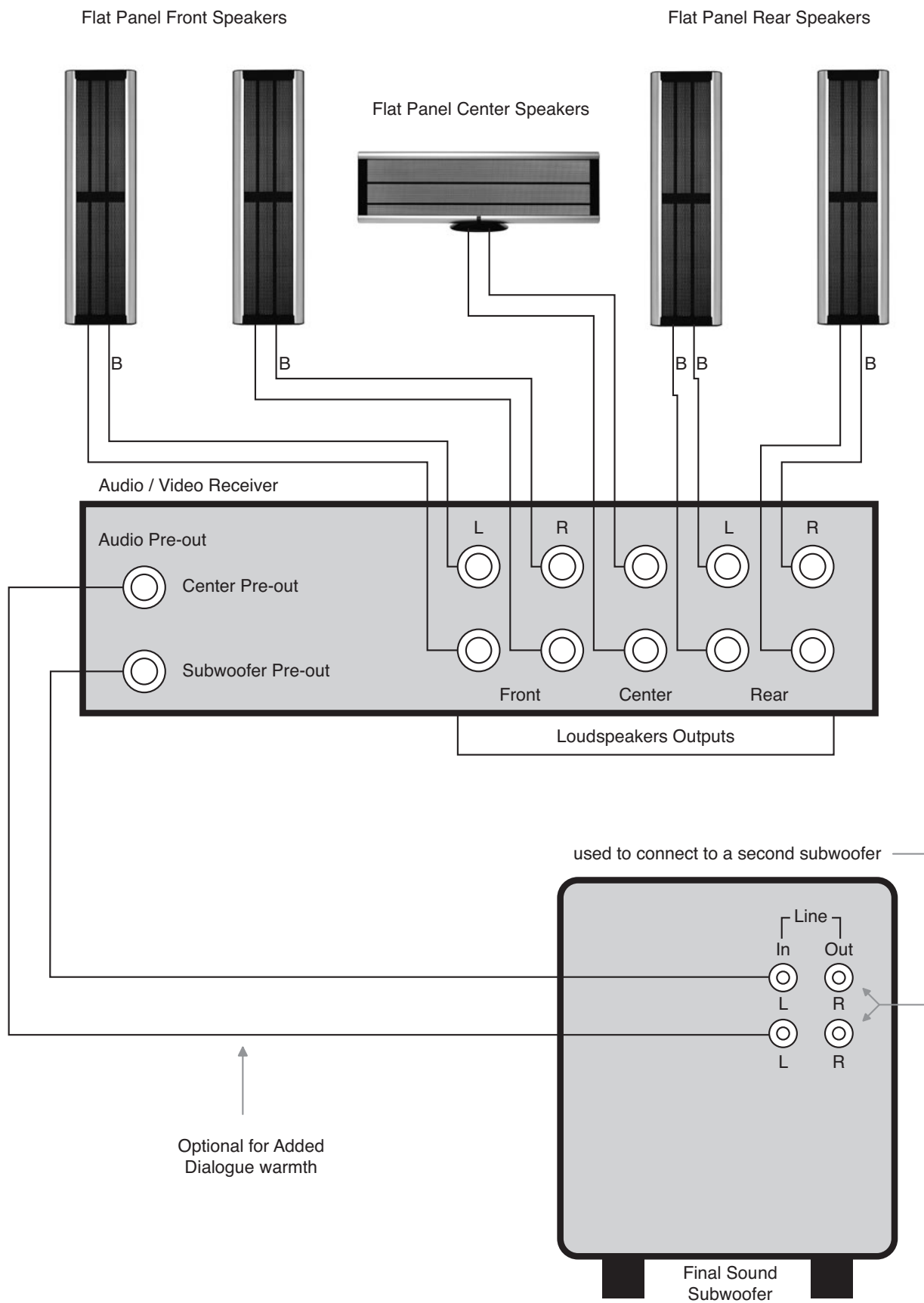
After having done this you can make the connection from the left and right channel loudspeaker output of your stereo amplifier to the High Level input of the Final Sound subwoofer. Make shure that the + and – are properly connected (see figure 2).

*If the subwoofer is equipped with a High Level Output, it is also possible to connect the left and right channel loudspeaker output of your stereo amplifier to the High Level Input of the Final Sound subwoofer and consequently the High Level Output to your left and right flat-panel speakers.*

*Make sure that the + and – are properly connected. This alternative connection method is not shown in figure 2.*

## INSTALLING THE FINAL SOUND MODEL F600i HOME THEATER SYSTEM

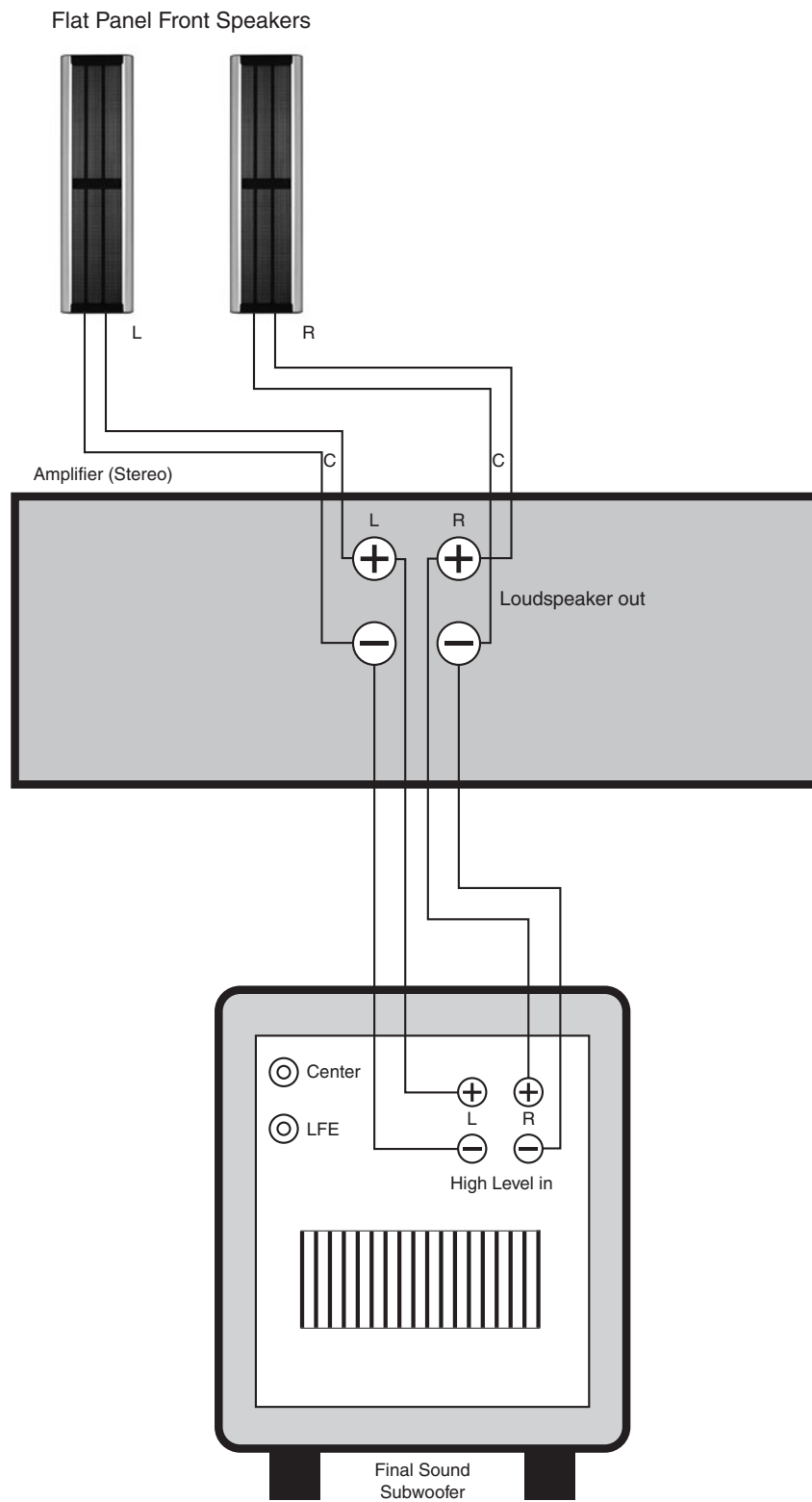
Figure 1





## INSTALLING THE FINAL SOUND MODEL F600i HOME THEATER SYSTEM

Figure 2



## 10. GENERAL INFORMATION ABOUT FINAL TECHNOLOGY

The flat-panel loudspeakers made by Final Sound are speakers with remarkable and unique features. Thanks to many years of research, the Final Sound design and engineering team succeeded in effectively suppressing interfering resonance, thus reducing the resulting distortions to an absolute minimum. The result is an extremely refined and clear sound in which the signal peaks and dynamic extremities are reproduced without any problems. Visually, flat-panel loudspeaker made by Final Sound is a transparent appearance, which will continue to captivate as a result of its sound reproduction and timeless design.

### **Electrostatic Push-Pull principle**

Final Sound flat-panel loudspeakers make use of the complex electrostatic technology. An electrostatic loudspeaker produces sound by allowing a thin flexible diaphragm to move between two fixed plates (stators). The unmatched sound quality of the F600i electrostatic speakers has been achieved because of the application of the Final Sound Inverter principle (for more details see our website [www.finalsound.com](http://www.finalsound.com)). An Inverted electrostatic loudspeaker speaker is connected to a power supply to and the stators with a permanent + and - high DC Voltage (low power). The audio signal transmitted by the amplifier is converted by means of an audio transformer (which is incorporated in the electronic modules) to feed the diaphragm (also called the membrane). As a result, the diaphragm vibrates between the stators perfectly following the music signal and producing the life like sound typical for an Inverted electrostatic speaker.

This method has a number of important advantages in comparison with traditional electro-dynamic loudspeakers. The diaphragm of an electrostatic loudspeaker weighs a fraction of the membrane of a conventional electro-dynamic loudspeaker, which means the air can be brought into vibration much quicker and accurately. The large surface area of the diaphragm creates a broad distribution of the sound waves, resulting in an optimum spatial effect.

In Final Sound's design the push-pull principle has been applied. This entirely symmetrical drive of the diaphragm is the basic principle of an extremely low distortion rate. In order to maintain this symmetry we have chosen a level non-curved construction.

### **Resonance**

Interfering resonance, inherent vibrations that can occur in all elements of the electrostatic loudspeaker, has an electrical as well as a mechanical origin. Important physical similarities exist between both types of resonance. Transformers mainly cause the electrical resonance. Therefore, the latter are developed under our direct supervision and are constructed using first class materials.

### **Mechanical resonance**

The mechanical resonance can be divided into frame, stator and diaphragm resonance. The Final Sound electrostatic flat-panel loudspeakers have a fully metal frame, which is extremely stable and does not permit any resonance. The stator is constituted of perforated plates with a diaphragm in between them. It has a fully glued sandwich construction and is therefore free of torsion and virtually free of resonance. The diaphragm is braced and divided into three segments in such a fashion that the diaphragm resonance is limited to such an extent that it remains outside the audible acoustic range.

### **Construction**

The construction, the quality of the electronic components and transformers are of vital importance in order to achieve the ultimate quality of sound reproduction. Together with the accurate assembly, which is thoroughly checked in every phase, Final Sound guarantees many years of listening pleasure.

### **Spatial form**

Electrostatic loudspeakers require a considerable surface area to produce superior sound. The advantage of electrostatic loudspeakers is that they are extremely thin and transparent. This results in a slender and transparent form with a superb three-dimensional spatial effect. Not only regarding the sound, but also the design. In spite of their large surface area, Final Sound loudspeakers are not detrimental to your interior; to the contrary they may add an attractive element to your interior.

As every Final Sound loudspeaker is built from individual components made by a partly automated, partly hand-made manufacturing process, you are able to choose a design for your loudspeaker that best matches your living room environment. In other words, Final Sound offers everyone great visual as well as sonic satisfaction.

## 11. FREQUENTLY ASKED QUESTIONS (FAQ)

The answers to the following questions for the Final Sound Center, Rear and Front speakers, as well as the subwoofer are described in the previous chapters:

What is the function of the particular unit?

How do I start installing it safely?

Where do I place each speaker?

How do I connect the wires?

How should I clean and maintain the unit?

More question and answers:

### **What is the advantage of the Final Sound electrostatic technology in comparison with ordinary electro-dynamic loudspeakers?**

The distinguishing feature of the Final Sound loudspeaker is its precision in reproducing sound and of course the fact that they are slim, transparent and elegant looking. Vibrations of the cone generate the sound from ordinary speakers; while in case of an electrostatic loudspeaker vibrations of the transparent diaphragm generate it. There is a huge difference in mass of the material used to bring the air into vibration. In traditional electro-dynamic loudspeakers the amplifier has to activate and move a voice coil and a piece of paper, plastic or metal.

The mass of the diaphragm, which an electrostatic loudspeaker uses to make the air vibrate, is so much lighter, that it is capable of much more rapid acceleration and deceleration, resulting in a more dynamic and transparent reproduction.

### **Doesn't a Final Sound flat-panel speaker get dirty?**

This depends for a great deal on the place where the loudspeakers are situated. When put next to the fireplace or the cooker, the answer is yes. You should appreciate that a Final Sound electrostatic loudspeaker is not covered, because that would be detrimental to the sound. Come to that, a little dust is not a problem since the stators can easily be cleaned with a vacuum cleaner.

To prevent damage to the panels and diaphragms, please use only a vacuum cleaner with low suction power. Nonetheless, Final Sound has developed diaphragms that repel dust and dirt to a maximum extent, and consequently guarantee the quality of sound for a very long period of time. However, should the diaphragm become dirty after a couple of years, you can then have your Final Sound dealer clean it.

### **What about funny noises your flat-panel speakers might produce?**

Funny noises can occur sometimes when you listen closely to the panels. These are generally only audible when the amplifier is switched off. These are normal to electrostatic loudspeaker in general, and are absolutely harmless. These do not affect the loudspeaker or the audio-system.

### **Does the Final Sound Home Theatre System have to be connected to a power supply?**

The Final Sound Home Theatre System is designed to be connected to the mains for 24 hours a day. The power consumption is negligible. Unlike vapor deposited metal coatings, the conductors on the Final Sound loudspeaker diaphragms are completely inert, and their electrical conductivity cannot degrade. Moreover, the conductivity of the diaphragms is independent from external factors such as the humidity of the air.

### **How long does a Final Sound flat-panel speaker last?**

Electrostatic loudspeakers have been on the market since 1935, although materials allowing for an optimization of the technology have only become available in the last 10 years. Final Sound uses diaphragms that last a great many years. Final Sound has used these diaphragms for well over a period of 10 years.

## **Could my children, pets, or myself be shocked by the high-voltage present in the flat-panel speakers?**

No. Whilst your Final Sound loudspeaker systems are indeed connected to a power supply, they have excellent insulation. When you remove your sweater in the winter, its electrostatic charge will be considerably greater than the charge on the diaphragm in a Final Sound speaker. But of course, you should not open the loudspeakers, nor repair them. Only your authorized Final Sound service technician, who is professionally trained in the workings of all Final Sound products, should carry out this work. We stress not to touch any product that is connected to the power supply, during operation.

## **Will excessive smoke or dust cause any problems?**

Exposure to excessive contaminants, such as smoke or dust, may potentially affect the performance of the electrostatic diaphragm and may cause discoloration of the diaphragm. Dirt and dust may be removed by means of a soft brush attached to your vacuum cleaner. Before you clean your loudspeakers it is recommended to unplug the system from the mains 24 hours in advance.

## **Are Final Sound front and rear flat-panel speakers to be treated as satellites?**

Yes, they have to be installed as satellites on your Audio/Video receiver or multi channel amplifier. The correct settings are "MEDIUM satellites" for the Model F600i flat-panel speakers, which has to do with the frequency range of the loudspeaker output.

## **Is it possible to change wall-mounted speakers into floor standers?**

Yes, special developed stands are optional. The Final Sound dealer can give you further information.

Should I unplug my Final Sound Home Theatre System during lightning?

Yes. Unplugging before the storm is even better. It's a good idea to disconnect all of your audio/video components during stormy weather.

## **What is to be done if puncturing, knocking over, or come in contact with fluids and fire damages the Final Sound speakers?**

Unplug your Final Sound loudspeakers and contact your Final Sound dealer.

## **Can I use a separate Final Sound Center Speaker channel as a stand-alone?**

Yes, you can. We recommend you play the Final Sound Center together with the Final Sound subwoofer, which is designed to function in harmony with the Final Sound Center Speaker.

## **Why do I need a Final Sound subwoofer?**

The Final Sound Home Theater is based on the 5.1 multi channel amplifiers, which require 2 front speakers, two rear speakers, one Center Speaker and a subwoofer.

The subwoofer will produce the low frequencies when necessary and is designed to function in harmony with the other Final Sound speakers.

## **Do I need to spend much for a good matching A/V receiver or multi channel amplifier?**

Depends. A good amplifier from 35 watts or more is sufficient. If you want to play music loudly, then the amplifier must be able to supply more energy (voltage).

The most important factor in this respect is that the amplifier should be stable, i.e. that the power-supply is capable of working correctly under different circumstances. It is important to realize that a Final Sound loudspeaker is very transparent and thoroughly revealing. You will hear everything on your CD's, but you will also be confronted with the characteristics and quality of your amplifier and source. This is why the stability of the amplifier is of considerably greater importance than its' maximum power.

## **Which amplifiers do you recommend?**

Many questions surrounding amplifiers, chips, formats, DVD formats etc. are still being evaluated throughout the industry. The quality of the amplifier is important, but so is ease of use and set-up. For example, an amplifier should be easy to switch from stereo to 5.1 by a user without having to call the dealer. Since some amplifiers will perform better on the Final Sound system than others, we recommend asking your dealer for the best choice.

## **What are the roles of the six speakers in a Home Theater System?**

Your main channels, e.g. the left and right speakers, will handle the larger special effects, the musical score, and any left and right effects.

The Center channel will handle almost all the dialogue as well as 60-70% of the main action on the screen. The rear channels are for ambient effects or to recreate different settings, as well as the screen action that is recorded to happen at the rear of the listener.

The subwoofer handles the extremely low frequencies such as the explosions in an action film or the deepest rumble of a bass drum.

## **What is the difference between Dolby Pro Logic and Dolby Digital?**

Dolby Pro Logic is a 4-channel surround system that provides left and right main speaker channels, a Center channel to keep dialogue Centered on the TV regardless of viewer location, and a mono surround channel (This mono signal is usually split between two surround speakers). Dolby Digital is a 5.1 channel surround system that provides left and right main speaker channels, a Center channel, and discrete, full-range left and right surround channels. The .1 in 5.1 is the Low Frequency Effects (LFE) channel. It sends additional bass information to the subwoofer-usually involving dramatic sound effects like explosions.

## **What is “timbre matching”?**

This means that all of the speakers in a Home Theater system have the same sound characteristics or voicing. This allows for a smooth, convincing transitions between left, center, right, and surround channels.

## **Are Final speakers suitable for Dolby Digital AC-3, DTS, etc.?**

Yes. Final speakers are very accurate to be used with any decoding system designed for the Home Theater.

## **Can my Final Sound loudspeakers become updated?**

Absolutely. Technology continues to develop, including that of electrostatic loudspeakers. For this reason, Final Sound loudspeakers are constructed in a way such that it is easy to renew and replace components. Not only does this restrict maintenance costs; it also offers you the opportunity to modify your loudspeakers to keep them thoroughly up-to-date. Your Final Sound dealer can carry out these updates for you.

## **What is the warranty?**

Your Final Sound Home Theatre System can be provided with limited 3-year warranty coverage on the flat-panel speakers and 1-year warranty coverage on the subwoofer if the registry card in the manual is completed and returned to Final Sound. The limited warranty will not be honored when the product has been used or handled other than in accordance with the instructions in the user manual. See for more details the chapter Warranty Conditions on page 5 of this manual.

## **Is a Final loudspeaker protected against overloading?**

Basically: yes The design of the Final Inverted series of electrostatic loudspeakers has been done with the protection of the user in mind and the protection of the loudspeakers against mistreatment in mind. The design has several levels of protection built into the electronics. One of those circuits protects against overloading. In case of an overload condition, the loudspeaker will shut off for a short period of time. If the overload condition is persistent, please reduce the volume of the amplifier. But, protecting a loudspeaker is always a trade off between simply cutting off musical information and allowing dynamics to surpass reasonable sound levels. Before serious damage can be done, every loudspeaker will first give a clear warning signal by means of severe audible distortion. That's the moment to lower the volume. If the state of overloading (and severe audible distortion) will continue, serious damage to the panels can occur. Because of the protection circuit's 'trade off' behavior, we do not guarantee that this circuit will protect the loudspeaker against all possible kinds of mistreatment. Damage resulting from such mistreatment is not covered by our warranty conditions.

## **Where can I find more information about Final Sound?**

For any questions about Final Sound or about installing your speakers, contact your Final Sound dealer or visit our website at [www.finalsound.com](http://www.finalsound.com).

## 12. WARRANTY CARD

In order to validate your warranty registration we kindly ask you to fill in the following data or go to our Web site at [www.finalsound.com](http://www.finalsound.com) to register on-line. For registration, this form has to be accompanied by a copy of your purchase receipt. The address to send to has already been printed on the envelope included. We thank you and wish you great enjoyment with your new Final Sound product.

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_

Country: \_\_\_\_\_

Authorized Final Sound dealer: \_\_\_\_\_

Salesperson's Name: \_\_\_\_\_

Please fill in for warranty registration the serial numbers of all units you have bought.  
(Numbers appear on labels at the back of the product)

1 Final Sound Center Speaker: \_\_\_\_\_

1 set Final Sound Front Speakers (Home Theatre or Stereo System, 2 panels): \_\_\_\_\_

1 set Final Sound Rear Speakers (2 panels): \_\_\_\_\_

1 Final Sound Subwoofer: \_\_\_\_\_

To improve our products and customer service, we would greatly appreciate your answers to the following questions.

Title or profession: \_\_\_\_\_ Age: \_\_\_\_\_

How did you find out about Final Sound? \_\_\_\_\_

Advertisement in \_\_\_\_\_

Relations/friends \_\_\_\_\_

Internet: \_\_\_\_\_

Other \_\_\_\_\_

What kind of amplifier do you use?

Brand: \_\_\_\_\_

Type: \_\_\_\_\_

If you have any comments on our products and services, please use the back of the form.  
Thank you very much for taking time to complete in this form and sending it to:

Final Sound Solutions B.V.  
Eisenhowerweg 8D  
5466 AC Veghel  
The Netherlands





Final Sound Solutions B.V.  
Eisenhowerweg 8D  
5466AC Veghel  
The Netherlands  
[www.finalsound.com](http://www.finalsound.com)